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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,135	09/26/2003	Stephen C. Muma	22856/00302	6109

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EXAMINER

SAYALA, CHHAYA D

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,135

Applicant(s)

MUMA, STEPHEN C.

Examiner

C. SAYALA

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/19/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3, 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore (US Patent 5354350)

Moore teaches a mixture of humates and phosphates as a granular product. The amount of humate and phosphate are shown at col. 6, lines 55-60. The patent also teaches plant nutrient sources or iron in the form of MgO, MnO, ZnO, CuO, iron oxide, cobalt or calcium oxide (col. 3, lines 35-40).

2. Claims 1, 3, 7-8, 11-16, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson (US Patent 4743287).

The Robinson patent teaches combining humates with phosphates and granulating it after the addition of essential elements and trace elements in amounts as necessary or required (see col. 7, lines 25-30). The humic acid content is given at col. 10, line 49 and phosphate amounts at Table 1 (at least). See col. 6, lines 45-55 too.

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Although the amounts as claimed are not specifically stated as claimed, they are inherent because the humic acid content is the same. With regard to the process, the mixture is heated to a temperature shown at col. 5, line 34. See also col. 9 and example 1.

3. Claim 37 is rejected under 35 U.S.C. 102(b) as being anticipated by Moore or Robinson or Karcher et al. (US Patent 311404).

Each of these patents is described at paragraphs 1, 2 and 7. This claim is written written in a product-by-process format and as such, it is the novelty of the instantly claimed product that needs to be established and not that of the recited process steps. In re Brown, 173 USPQ 685 (CCPA 1972); In re Wertheim, 191 USPQ (CCPA 1976).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4, 19, 21-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Austin et al. (US Patent 3024098) and Sakamoto et al. (US Pub. 2002/0104347).

Moore is as described above. The patent does not teach the limitations of the claims herein, some of which are coating with a water-repellant or compressing the fertilizer or the process of making, etc.

The process is shown at col. 5, lines 1-12; wherein the components are admixed and heated to the requisite temperatures. See also example 1. Note claim 23 (instant) is shown at col. 6, line 62. The patent does not show compressing the granule or breaking the granule into the required size or coating it. Austin et al. teach that phosphate containing fertilizers can be compressed into a unitary mass of desired size, along with a binder, such as starch (see col. 3, lines 59-62). Although the patent does not teach humates, it includes another nitrogen-containing compound, urea formaldehyde, albeit an organic fertilizer. Example 3 teaches that when this unitary mass is used, it releases slowly; whereas, if powder is used, it contributes to a quicker release. Thus, depending on the needs of the artisan, it would have been obvious to one of ordinary skill in the art to grind the unitary mass to a powder or to the desired granular size. The patent teaches to use suitable conditions to compress the nutrients. This disclosure renders obvious the fact the pressure and temperature during compression would have been within realm of ordinary skill. As for the limitation directed to coating granules, Sakamoto et al. that is also drawn to nitrogen-phosphate fertilizers teaches that such a concept was already known in the art. At paragraphs

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[0065] and [0068] to [0071], the reference shows granulating aids such as binders to include starch and a water repellent coating to control dissolution of the fertilizer. To enhance the product with such benefits would have been obvious to the artisan, particularly since coating granulates with wax is a common and obvious expedient in this art. Note also that Sakamoto et al. teach a number of adjustments to fertilizer compositions, such as binders and other nutrients (paragraph [0066]).

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Austin et al. and further in view of Miele et al. (US Patent 6387145).

The primary references are as described above. The references do not teach the use of an inoculant with mono-potassium phosphate. However, Miele et al. teach that the addition of organisms such as the well-known and well established rhizobia (see col. 4, line 18 and claim 6), to fertilizer composition was known and beneficial. To incorporate this, therefore, would have been obvious. Note that Miele et al. is also drawn to phosphates, and phospho-nitrogen fertilizers.

6. Claims 5-8, 17-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Austin et al. and further in view of Rogers et al. (US Patent 5256544).

Moore and Austin et al. are as described above. While Moore teaches that only water-soluble inorganic phosphates are useful in this invention, he does not teach how insoluble phosphates can be converted to the water soluble form to be made useful in

Moore. Austin et al. meanwhile teach a number of phosphates at col. 3, lines 40-47, that are water-soluble, and a few, such as rock-phosphate that is not. To render it soluble however, was already known in the art at the time the invention was made, as Rogers et al. established in their patent. They disclose that phosphate from the ore can be solubilized by microorganisms. To use such a feature so that rock phosphate can be rendered soluble for use in the Moore invention would have been obvious.

Claim Rejections - 35 USC § 102/Claim Rejections - 35 USC § 103

7. Claims 1, 3, 9-10, 11-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Karcher et al. (US Patent 311404).

The patent teaches a combination of humates and phosphates. Amounts are taught at col. 5, line 70 to col. 6, line 2, for instance. The fertilizer produced also contains "other plant nutrients" such as potassium. This rejection is being made under both statutes, since the amount of phosphates is given in terms of phosphorus.

Conclusion

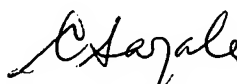
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The motivation to combine humates with phosphates and mineral fertilizers is given at section 7 of the Levinski article, "TeraVita", downloaded from <http://www.teravita.com/Humates/chapter1.htm>, 1996, which also shows the benefits that have been known and established in the art of combining these two. Also see Waters et al. at col. 4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. SAYALA whose telephone number is 571-272-1405.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. SAYALA
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Group 1700.